



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary South Marlow Crest Sale 341-03-37

District: Coos

Date: 9/4/02

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$398,832.42	\$363.06	\$399,195.48
		<b>Project Work</b>	(\$42,610.78)
		<b>Advertised Value</b>	\$356,584.70



# Timber Sale Appraisal Timber Description South Marlow Crest Sale 341-03-37

"STEWARDSHIP IN FORESTRY"

**District:** Coos

**Location:** T24S, R11W, Sections 28 & 29, Coos County

**Date:** 9/4/02

**Stand Stocking:** 60%

Species	Avg. DBH	Amortized %	Recovery %
Douglas - Fir	18	0	95
Alder (Red)	11	0	90

Volume by Grade	Douglas - Fir	Alder (Red)	Total
SM	35	0	35
2S	577	0	577
3S	331	0	331
4S	0	2	2
<b>Total</b>	943	2	945

**Comments:** Pond Values Used: 2nd Quarter 2002



# Timber Sale Appraisal Logging Conditions South Marlow Crest Sale 341-03-37

"STEWARDSHIP IN FORESTRY"

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<b>Combination#:</b> 1	Douglas - Fir	100.00%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Medium Tower >40 - <70		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
<b>Loads/Day:</b>	12		<b>Bd. Ft./Load:</b> 4,000
<b>Cost/MBF:</b>	\$69.10		
<b>Machines:</b>			
	Log Loader (A)		
	Tower Yarder (Medium)		
<b>Combination#:</b> 2	Alder (Red)	100.00%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Small Tower <=40		<b>Process:</b> Manual Delimiting
<b>Tree Size:</b>	Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF		
<b>Loads/Day:</b>	3		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$245.53		
<b>Machines:</b>			
	Log Loader (A)		
	Tower Yarder (Small)		



# Timber Sale Appraisal Logging Costs South Marlow Crest Sale 341-03-37

"STEWARDSHIP IN FORESTRY"

Date: 9/4/02

Operating Seasons: 0.8

Profit & Risk: 15%

Project Costs: \$42,611

Other Costs (P/R): \$4,420

Slash Disposal: \$0

Other Costs: \$0

Road Maintenance: \$0.10

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.1	0.0	0.0	0.0

### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$0.00	3.0	4.5
Alder (Red)	\$0.00	3.0	3.5



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Logging Costs Breakdown South Marlow Crest Sale 341-03-37

Costs	Douglas - Fir	Alder (Red)
<b>Logging</b>	69.10	245.53
<b>Road Maintenance</b>	0.11	0.11
<b>Fire Protection</b>	2.29	2.29
<b>Hauling</b>	35.89	48.67
<b>Other (P/R appl.)</b>	4.68	4.68
<b>Profit &amp; Risk</b>	16.81	45.19
<b>Slash Disposal</b>	0.00	0.00
<b>Scaling</b>	2.00	2.00
<b>Other</b>	0.00	0.00
<b>Total</b>	130.88	348.47

<b>Amortization</b>	0.00	0.00
<b>Pond Value</b>	553.82	530.00
<b>Stumpage</b>	422.94	181.53
<b>Amortized</b>	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary South Marlow Crest Sale 341-03-37

## Amortized

	Douglas - Fir	Alder (Red)
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

## Unamortized

	Douglas - Fir	Alder (Red)
MBF	943.00	2.00
Value	422.94	181.53
Total	398,832.42	363.06

## Gross Timber Sale Value

**Recovery \$399,195.48**

Prepared by: Norma Kline

Date: 9/4/02

District: Coos

Phone: (541) 267-1758

## Summary of "Other Costs" for Timber Sale Appraisals

Sale Name: South Marlow Crest

**Additional "Other Cost" with additional profit and risk to be added:**

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
<b>Felling</b>				
Directional Felling	MBF	500	\$ 2.00	\$ 1,000.00 \$ 1,000.00
<b>Yarding and Loading</b>				
Brand and paint logs	MBF	1060	\$ 2.00	\$ 2,120.00 \$ 2,120.00
Loader time for firewood stacking	Hours	4	\$ 75.00	\$ 300.00 \$ 300.00
<b>Tree Topping</b>				
	Trees	10	\$ 100.00	\$ 1,000.00 \$ 1,000.00

**Miscellaneous Costs**

Maintenance rock per section 5	Cubic Yards	\$ 18.00	\$ -	\$ -
Safety Flagging and/or signing	per day	\$ 150.00	\$ -	\$ -

**Total additional "Other Cost" with additional profit and risk to be added** **\$ 4,420.00**

**Additional "Other Cost" with no additional profit and Risk**

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
Non-required road construction	Stations			\$ -
Non-rquired road rocking	Cubic Yards			\$ -
Stream clearance	Feet			\$ -
Scaling (high piece count)	MBF		\$ 1.00	\$ -

**Total additional "Other Cost" with no additional profit and Risk** **\$ -**

**SUMMARY OF CONSTRUCTION COST**  
**South Marlow Crest**

**Project No. 1A: Road and Landing Construction**

Points        E to F  
Length:        530'  
Type:          14 ft w/ditch

**Clearing and Grubbing**

0.5        acres at        \$1,000.00        per acre        \$500.00

**Total clearing and grubbing**                                **\$500.00**

**Excavation**

at excavation (2+35 - 5+30, sidecast const	<u>1000</u>	cubic yds at	<u>\$0.66</u>	per cu yd	<u>\$660.00</u>
Cat time to shape road, & prep and shape	<u>4</u>	hrs at	<u>\$130.00</u>	per hr	<u>\$520.00</u>
waste area at pt. I					
Excavation (0+00 - 2+35)	<u>1170</u>	cubic yds at	<u>\$0.80</u>	per cu yd	<u>\$936.00</u>
Drill and Shoot	<u>144</u>	cubic yds at	<u>\$3.00</u>	per cu yd	<u>\$432.00</u>
Laborer	<u>10</u>	hrs at	<u>\$30.00</u>	per hr	<u>\$300.00</u>
Roller to prep surface for rock	<u>5</u>	STA at	<u>\$12.50</u>	per STA	<u>\$66.25</u>

**Total Excavation**                                **\$2,914.25**

**Hauling**

Endhaul to curve reconstruction at pt. D	<u>1000</u>	cubic yds at	<u>\$1.00</u>	per cu yd	<u>\$1,000.00</u>
Endhaul to waste area at point I	<u>170</u>	cubic yds at	<u>\$0.60</u>	per cu yd	<u>\$102.00</u>

**Total Hauling**                                **\$1,102.00**

**Grade Road Surface**

1        hrs at        \$75.00        per hour        \$75.00

**Total Grading**                                **\$75.00**

**Project 1A Cost**                                **\$4,591.25**

**Project No. 1B: Road and Landing Construction**

Points        G to H  
Length:        270'  
Type:          14 ft w/ditch

**Clearing and Grubbing**

0.4        acres at        \$1,000.00        per acre        \$400.00

**Total clearing and grubbing**                                **\$400.00**



**Excavation**

Drill and Shoot	<u>127</u>	cubic yds at	<u>\$3.00</u>	per cu yd	<u>\$381.00</u>
Cat excavation and shape fill material	<u>1303</u>	cubic yds at	<u>\$0.65</u>	per cu yd	<u>\$846.95</u>
Laborer	<u>5</u>	hrs at	<u>\$30.00</u>	per hr	<u>\$150.00</u>

**Total Excavation** \$1,377.95

**Project 1B Cost** \$1,777.95

**Project No. 1C: Curve Re-Construction**

Points D

**Excavation**

Cat to shape fill material, reconstruct curv	<u>10</u>	hrs at	<u>\$130.00</u>	per hr	<u>\$1,300.00</u>
Roller to compact fill	<u>5</u>	hrs at	<u>\$58.00</u>	per hr	<u>\$290.00</u>

**Total Excavation** \$1,590.00

**Project 1C Cost** \$1,590.00

**Move-in**

Equipment	Miles	Mileage Factor	Equipment Allowance	Total
Excavator	25	0.58	\$533.00	\$309.14
D8 Cat	25	0.58	\$533.00	\$309.14
Grader	25	0.58	\$241.00	\$139.78
Drill & Comp	25	0.58	\$241.00	\$139.78
Dump Truck	25	0.58	\$144.00	\$83.52
Roller	25	0.58	\$241.00	\$139.78

**Total Move-in** \$1,121.14

**Project 1 Cost** \$9,080.34

**Project 2A: Road Improvement**

Points A to C (1100 Rd)  
Length: 10,577'  
Type: 14 ft w/ditch

**Grade Road Surface**

Grade road surface and prep for rock	<u>4</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$300.00</u>
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**Total Grading** \$300.00

**Project 2A Cost** \$300.00

**Project 2B: Road Improvement**

Points C to D (1120 Rd)  
Length: 530'  
Type: 14 ft w/ditch

**Grade Road Surface**

Grade road surface and prep for rock 1 hrs at \$75.00 per hour \$75.00

**Total Grading \$75.00**

**Project 2B Cost \$75.00**

**Project 2C: Road Improvement**

Points D to E (1118 Rd)  
Length: 1000'  
Type: 14 ft w/ditch

**Clearing and Grubbing**

0.5 acres at \$590.00 per acre \$295.00

**Total clearing and grubbing \$295.00**

**Excavation**

Cat time for improvements 4 hrs at \$130.00 per hr \$520.00

**Total Excavation \$520.00**

**Culvert Installation**

2 ea., 30 ft culverts 60 ft at \$12.00 per hr \$720.00

(includes installation with excavator)

2 bands 2 bands at \$8.00 per band \$16.00

**Total Culverts \$736.00**

**Grade Road Surface**

1 hrs at \$75.00 per hour \$75.00

**Total Grading \$75.00**

**Project 2C Cost \$1,626.00**

**Project 2 Cost \$2,001.00**

**Project 3A: Road and Landing Surfacing**

**Road Surfacing**

Points	B to C (1100 Rd)	E to F
	C to D (1120 Rd)	G to H
	D to E (1118 Rd)	

**Points B to C (1100 Rd) (2.0 hr RT)**

Length: 2006'

3" comp. Depth of 1 1/2" - 0" (17 yds/STA)	<u>414</u>	cu yds at	<u>\$13.67</u>	per cu yd	<u>\$5,659.38</u>
includes additional rock for turnouts					
Processing (grading, water, rolling)	<u>414</u>	cu yds at	<u>\$1.75</u>	per cu yd	<u>\$724.50</u>

**Points C to D (1120 Rd) (2.0 hr RT)**

Length: 530'

4" comp. Depth of 1 1/2" - 0" (23 yds/STA)	<u>126</u>	cu yds at	<u>\$13.67</u>	per cu yd	<u>\$1,722.42</u>
Processing (grading, water, rolling)	<u>126</u>	cu yds at	<u>\$1.75</u>	per cu yd	<u>\$220.50</u>

**Points D to E (1118 Rd) (2.1 hr RT)**

Length: 1000'

8" comp. Depth of 2 1/2" - 0" (48 yds/STA)	<u>486</u>	cu yds at	<u>\$13.50</u>	per cu yd	<u>\$6,561.00</u>
Processing (grading, water, rolling)	<u>486</u>	cu yds at	<u>\$1.75</u>	per cu yd	<u>\$850.50</u>

**Points E to F (2.1 hr RT)**

Length: 530' (includes landing)

0" comp. Depth of 2 1/2" - 0" (61 yds/STA)	<u>270</u>	cu yds at	<u>\$13.50</u>	per cu yd	<u>\$3,645.00</u>
Processing (grading, water, rolling)	<u>270</u>	cu yds at	<u>\$1.75</u>	per cu yd	<u>\$472.50</u>

**Points G to H (2.0 hr RT)**

Length: 270' (includes landing)

0" comp. Depth of 2 1/2" - 0" (61 yds/STA)	<u>54</u>	cu yds at	<u>\$13.67</u>	per cu yd	<u>\$738.18</u>
Processing (grading, water, rolling)	<u>54</u>	cu yds at	<u>\$1.75</u>	per cu yd	<u>\$94.50</u>

**Landings at Points F and H**

144 yds for each landing of 6" jaw run	<u>288</u>	cu yds at	<u>\$13.02</u>	per cu yd	<u>\$3,749.76</u>
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**Total Rocking**

**\$24,438.24**

**Move-in**

Equipment	Miles	Mileage Factor	Equipment Allowance	Total
Roller	25	0.58	\$241.00	\$139.78
Water Truck	25	0.58	\$158.00	\$91.64
Grader	25	0.58	\$241.00	\$139.78

**Total Move-in**                      \$371.20

**Project 3A Cost**                      \$24,809.44

**Project 3B: Road Surfacing**

**Maintenance rock to be used as needed during log hauling**

Points            A to B (1100 Rd)  
Length:            8976'

3/4" - 0" Crushed Rock	<u>360</u>	cu yds at	<u>\$13.25</u>	per cu yd	<u>\$4,770.00</u>
1 1/2" - 0" Crushed Rock	<u>150</u>	cu yds at	<u>\$13.00</u>	per cu yd	<u>\$1,950.00</u>

**Project 3B Cost**                      \$6,720.00

**Project 3 cost**                      \$31,529.44

**Total Project Costs**                      \$42,610.78

# TIMBER SALE SUMMARY

## South Marlow Crest

**1. Type of sale:** Final harvest; Recovery, Sealed Bid.

**2. Boundary Lines:** Sale boundaries are marked on the ground with "Timber Sale Boundary" posters, red paint, and red flagging at locations shown on the Exhibit "A".

**3. Revenue Distribution:** This sale is 100% on BOF fund lands in Coos County.

**4. Sale Acreage:** The sale acreage is 20 acres. The acreage for the timber sale area was determined using orthophoto imagery on the ARCVIEW Geographic Information System program.

**5. Volume by Species, Fund, and County:** See attached table.

**6. Grade (by percent):**

Species	3 Peeler	Special Mill	2 Saw	3 Saw	4 Saw/Camp	Utility
Douglas-fir	0	4%	61%	35%	---	----
Hardwood	----	----	----	----	100%	----

**7. Cruise:** The sale area was variable plot cruised using the Big BAF cruise design, which consisted of 44 nested plots. Each plot consists of both a full 40 BAF count plot and a full 360 BAF measure plot. The 40 BAF count plot was used to tally the number of trees by species to determine the stand basal area. The 360 BAF plot was used to select trees to cruise for height, grade and defect. Thirty Big BAF trees were cruised at form point for diameter, height, grade and defect.

A. Cruise Summary Data:

Diameter	Top Diameter	Form Point	Form Factor	Top Cr Dia.	CV %	SE %
D4H	6" or 25% DBH	Conifer: 16' Hardwood: 4'	Estimated or measured on all trees	Con:6",25% Hdwd:8"	46	8

B. Stand Summary:

Variable Plot Cruise

Species	D4H	Trees per Acre	Basal Area (ft <sup>2</sup> /ac)	MBF per acre
Douglas-fir	18	142	251	47
Hardwood	11	35	23	2

C. Green Tree Retention: Green trees were designated by yellow W's within the sale unit as well as posted outside of the timber sale.

Green Tree Retention Marked within Timber Sale Area

Species	No.	Volume
Douglas-fir	21	24
Hardwood	6	1

Green Tree Retention Posted out of the Timber Sale Area

Species	No.	Volume
Douglas-fir	25	35
Hardwood	14	2
Red Cedar	3	2

D. Minor Species: Minor species were left as reserve trees as summarized below. The following table summarizes their approximate volume from the variable plot cruise reports.

Timber Sale Area	Hemlock	Cedar
Tree Count	20	40
Average Diameter	14	12
Volume MBF	2	2

**8. Timber Description:** The timber in this sale area is moderately stocked second-growth Douglas-fir approximately 70 years old.

**9. Topography:** The unit has steep, dissected slopes over 65%.

**10. Logging Method:** The sale will be cable logged uphill with single-end suspension required on most of the unit with full suspension required over designated streams. A motorized carriage may be required to obtain the necessary suspension. Artificial guyline anchors may need to be installed for yarding portions of the sale area as approved in the operations plan.

**11. Access:** From Coos Bay, proceed to the State 1000 road. Proceed approximately 1 mile up the 1000 road to the 1100 road, turn left on the 1100 road. Project point G is 500 ft south of the 1115 junction on the 1100 road.

**12. Projects:**

Project No. 1: Road and Landing Construction

Project No. 2: Road Improvement

Project No. 3: Road and Landing Surfacing

Project No. 4: Top 10 Trees

**NET VOLUMES AND ACREAGE  
SOUTH MARLOW CREST**

SALE AREA & SPECIES		Tree cnt. 100% Units	NET VOLUMES (MBF)								Vol. per Acre
Area	Spec		By County and Fund						Total Vols.		
			Coos			Douglas					
		CSL	BOF	Total	CSL	BOF	Total				
I	D-fir RA	0	943	943			0	943	47.1		
		0	2	2				2	<1		
<b>TOTALS</b>		0	945	945	0	0	0	945			

**TOTAL SALE VOLUME BY SPECIES**

Douglas-fir     943 MBF  
 Red Alder        2 MBF  
 Red Cedar        0 MBF  
 Total                945 MBF

Report by: Norma Kline  
 Date: 6/20/2002  
 Unit For. Wan P. King 7/3/02 Date  
 Asst. Dist. For. Greg Krumholz 7/3/2002 Date

**UTILITY AND SPECIAL CULL VOLUME NOT INCLUDED TO PROVIDE FOR RETENTION OF DOWN LOGS  
 NO INGROWTH INCLUDED**

**ACREAGE BY COUNTY (to nearest acre)**

Sale Area	Coos County						Douglas County						TOTAL ACRES
	CSL			BOF			CSL			BOF			
	Conifer		Hard wood	Conifer		Hard woods	Conifer		Hard woods	Conifer		Hard woods	
	cc	pc		cc	pc		cc	pc		cc	pc		
I				20									20
SUM	0	0	0	20	0	0	0	0	0	0	0	0	20

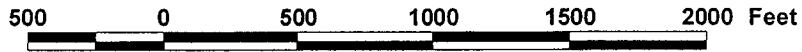
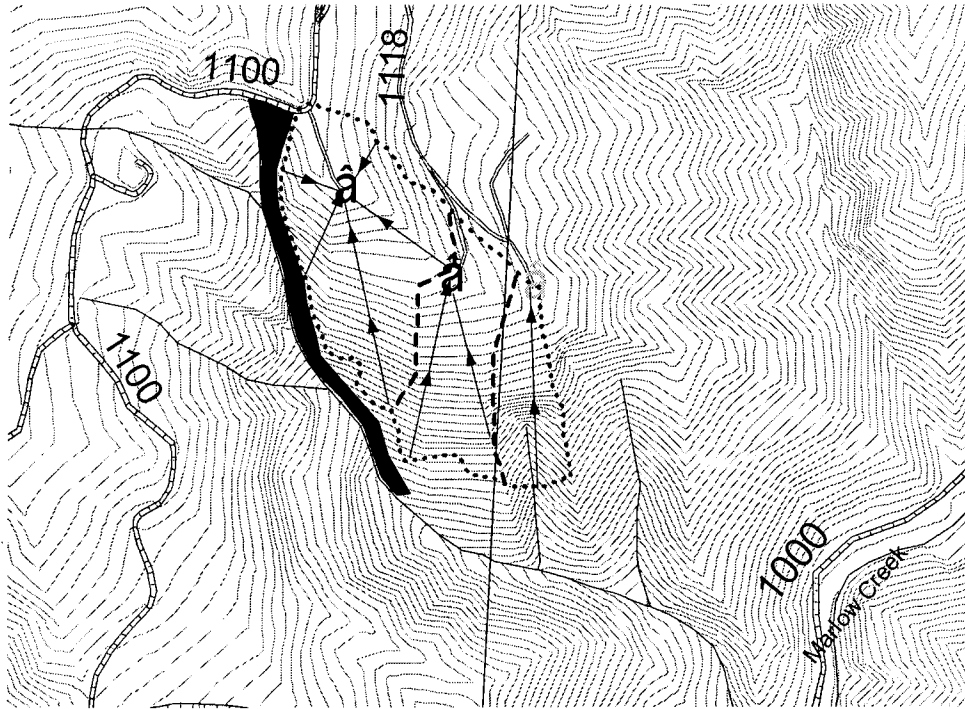
cc- clearcut

pc- partial cut

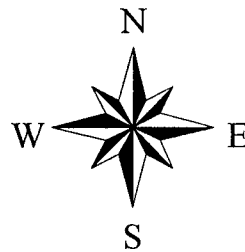
BOF - Board of Forestry

CSL - Common School Land

# South Marlow Crest Logging Plan



- Landings.shp
- Logging boundaries.shp
- Draws and Streams
- Purchaser Maintained Roads
- Boundary
- Sections
- Property Boundary
- State Maintained Roads
- End of Fish
- Stream Buffer
- 2411.shp





# WRITTEN PLAN

**SALE NAME:** South Marlow Crest

**LOCATION:** Portions of Sections 28 and 29, T24S R11W, Coos County, Oregon

**LANDOWNER:** Oregon Department of Forestry; 63612 Fifth Road, Coos Bay, Or.

**CONTRACT PURCHASER:** \_\_\_\_\_

**NOTIFICATION NO:** \_\_\_\_\_

FILE: I:\Timber Sales\FPAPLANS\Sullivan Ridge No. 4.doc (2/6/02)

## SITUATION AND PROTECTED RESOURCE

The South Marlow Crest timber sale is located in the *Tyee Core Area*. Slope and headwalls within the sale area are in excess of 70% gradient and so are classed as high risk sites. The protected resources is a downstream Type F, Marlow Creek

## LAYOUT

Landings have been provided to enable best possible deflection for suspension of logs while yarding the sale area.

## FELLING AND BUCKING

1. Felling within high risk areas shown on Exhibit "A" will not be allowed during December and January unless otherwise approved by STATE because of dry weather.
2. Trees shall be directionally felled parallel to or away from stream riparian management areas (RMA's) as feasible.
3. High stumps shall be left as needed to minimize accumulation of logs in stream channels.

## YARDING

1. Operator will use a machine and logging system capable of fully suspending logs..
2. Yarding within high risk areas shown on Exhibit "A" will not be allowed during December and January unless otherwise approved by STATE because of dry weather.
3. Operator will fully suspend logs when sufficient deflection is available.

**OPERATIONS PLAN.** Purchaser shall attach a yarding plan indicating landing locations, machinery and procedures to be used obtain adequate suspension in the sale area and to minimize impacts during the felling process.

**SLOPE PROTECTION.** Purchaser shall establish or maintain plant species that will enhance slope stability in harvested areas where needed to minimize the risk of erosion.

\_\_\_\_\_  
O.D.F. REPRESENTATIVE DATE:

\_\_\_\_\_  
PURCHASER REPRESENTATIVE DATE:

\_\_\_\_\_  
OPERATOR REPRESENTATIVE (if listed on notification) DATE:

APPROVED BY: \_\_\_\_\_ DATE:  
FOREST PRACTICES/UNIT FORESTER

\_\_\_\_\_  
O.D.F. REPRESENTATIVE DATE:

\_\_\_\_\_  
PURCHASER REPRESENTATIVE DATE:

\_\_\_\_\_  
OPERATOR REPRESENTATIVE (if listed on notification) DATE:

APPROVED BY: \_\_\_\_\_ DATE:  
FOREST PRACTICES FORESTER